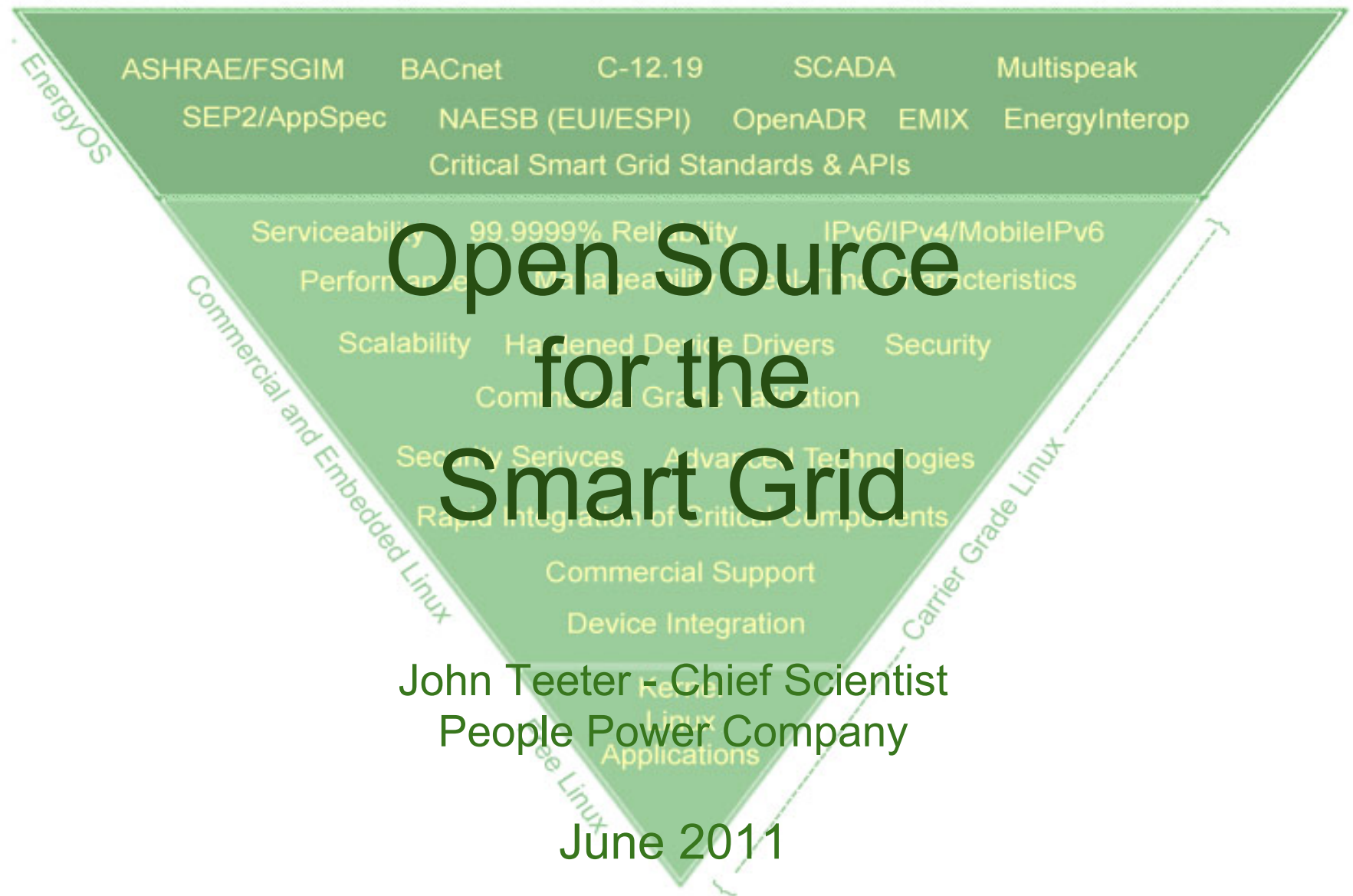


EnergyOS



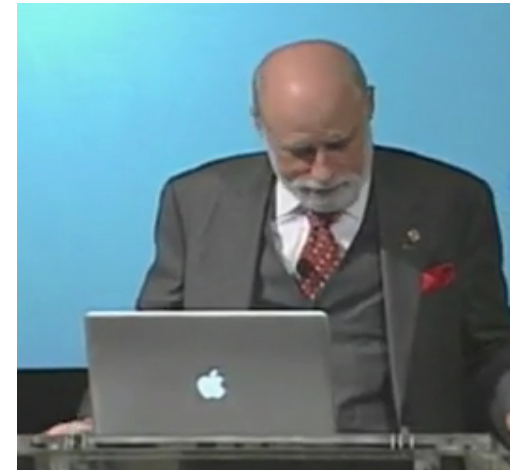
Like the Internet - The New Energy Network Changes Everything!

"It makes sense to take the successful processes used to create Internet standards and apply them to this new energy information network."

Vint Cerf, Chief Internet Evangelist, Google Inc.

- Member, SGIP Governing Board*
- Member, SGIP Architectural Committee*

Open source & public license technology initiatives were critical in the evolution of the Internet!



EnergyOS -

Open Source, Public Licensed
Smart Grid "Stacks"

Accelerate the Global Smart Grid

EnergyOS

11



The Broad View

What: An Open Development Enterprise

- Like the LINUX Foundation
- An enterprise for public/private sourcing
- "Utility Grade" infrastructure technology.
- Open Source Development Methodologies
- Public (BSD) License - Freely Available

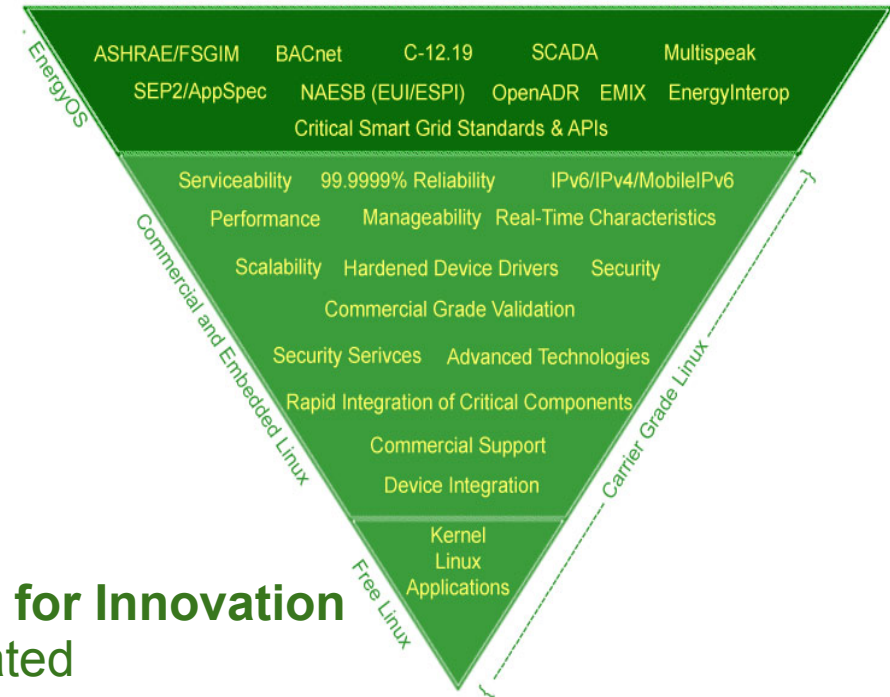
Why: To Develop an Openly Accessible Platform for Innovation

- The SGIP Catalog of Standards is Being Populated
- Open Source can Accelerate Interoperability
- Industrial Strength Implementations Leverage All Efforts
- Openly Accessible Implementations Lead to Rapid Innovation in the Marketplace.

When: In concert with the collaborative initiatives in the community

- 1Q11: Advisory Board Formed
- 2Q11: Organizational Structure In Place
- 2Q11: DoE/ARPA-E Proposal Submitted
- 3Q11: Project Development Initiation

<<----- NOW



Current Status

Advisory Board Membership:

- Dr. Wilfred Pinfold - Intel
- Dr. Kurt Yeager - Galvin Energy Initiative
- Dr. James Mater - QualityLogic
- John Nunneley - Gridata/Sunspec/SGIP.GB
- Stan Curtis - OpenCommons
- John Teeter - People Power Company
- Irv Badr - IBM
- Dr. Richard Soley - Object Management Group
- Stuart Cohen - Collaborative Software Initiative
- Mike Coop - Think Smart Grid

Object Management Group Smart Energy Working Group

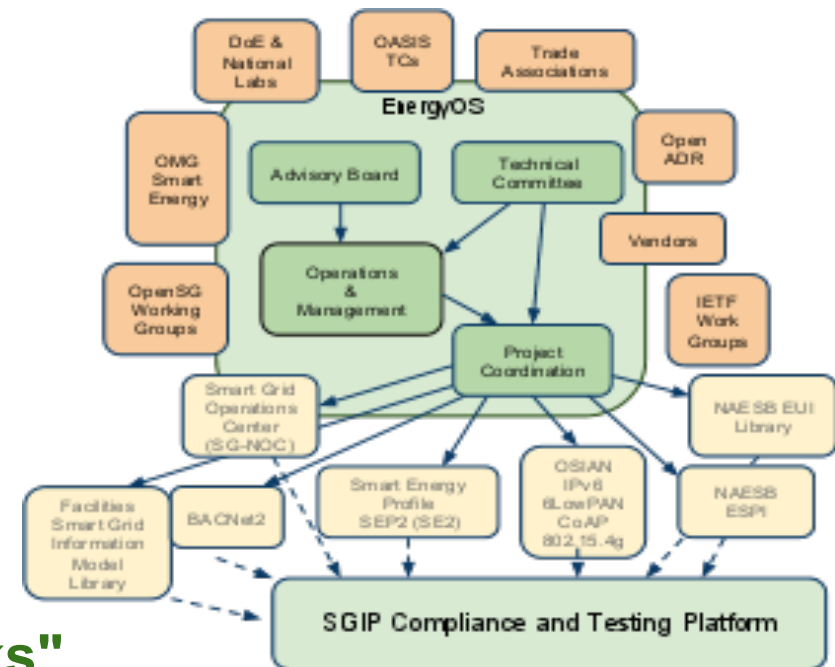
- Work within the OMG Structure (Incubation)
- June 22 Roadmap and Context Session
- Irv Badr or John Teeter for Further Information

Reach Out to the Community:

- Focal Point of Global Public/Private Collaborative
- Collaborate With/Support On-Going Efforts
- Hosted/Maintained Public Download
- Interoperability -> SGIP/TCCC Procedure

Creating Open-source/Public License "stacks"

For Smart Grid Architectural elements



Initial Project Set

OpenSEP:

- Transport Agnostic Java and C++
- Implementing the ZSE 2.0 AppSpec
- Alex Clark/BitStew and/or John Teeter

OpenESPI:

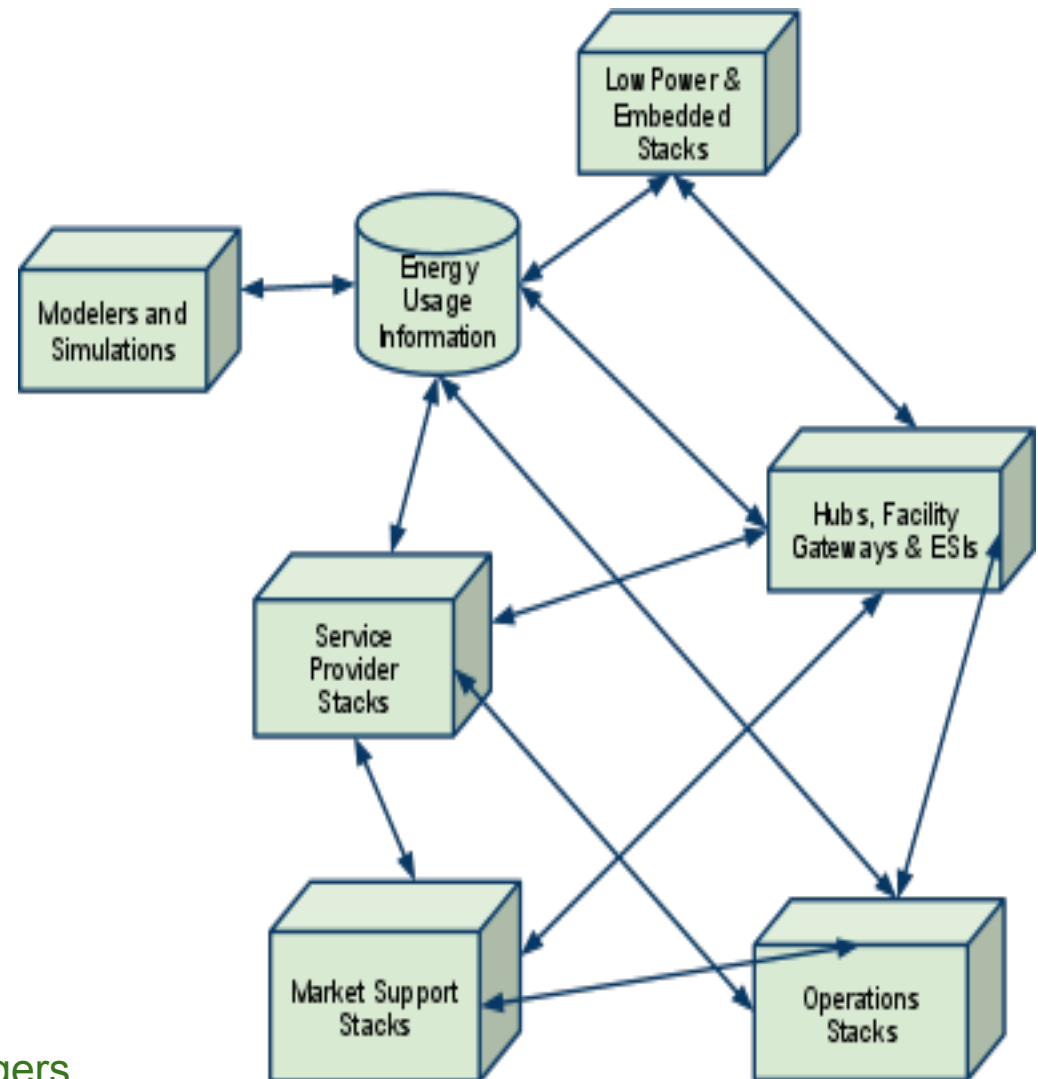
- NEASB ESPI/EUI Libraries
- Consumer<->DataCustodian<->ESP
- Tracking the NAESB Process

OpenInterop:

- OASIS EnergyInterop and eMIX
- Bringing Markets to Management
- ?? Time to Orchestrate

OpenFSGIM:

- ASHRAE/NEMA FSGIM
- Consumer<- ESI ->Services Providers
- Loads/Generators/Meters/EnergyManagers
- ?? Time to Orchestrate



GridNOC:

- Management Interoperability
- Packaging and Bundling the Parts
- Innovation and Operational Management

Intellectual Property and Licensing

Following the Models of Established Open Communities

- Encourage Contributions to Seed Projects
- Collaboration with Existing Open Efforts
- Preference for [BSD 3 Clause Public License](#)
- Example (OSIAN Project):

Bottom Line:

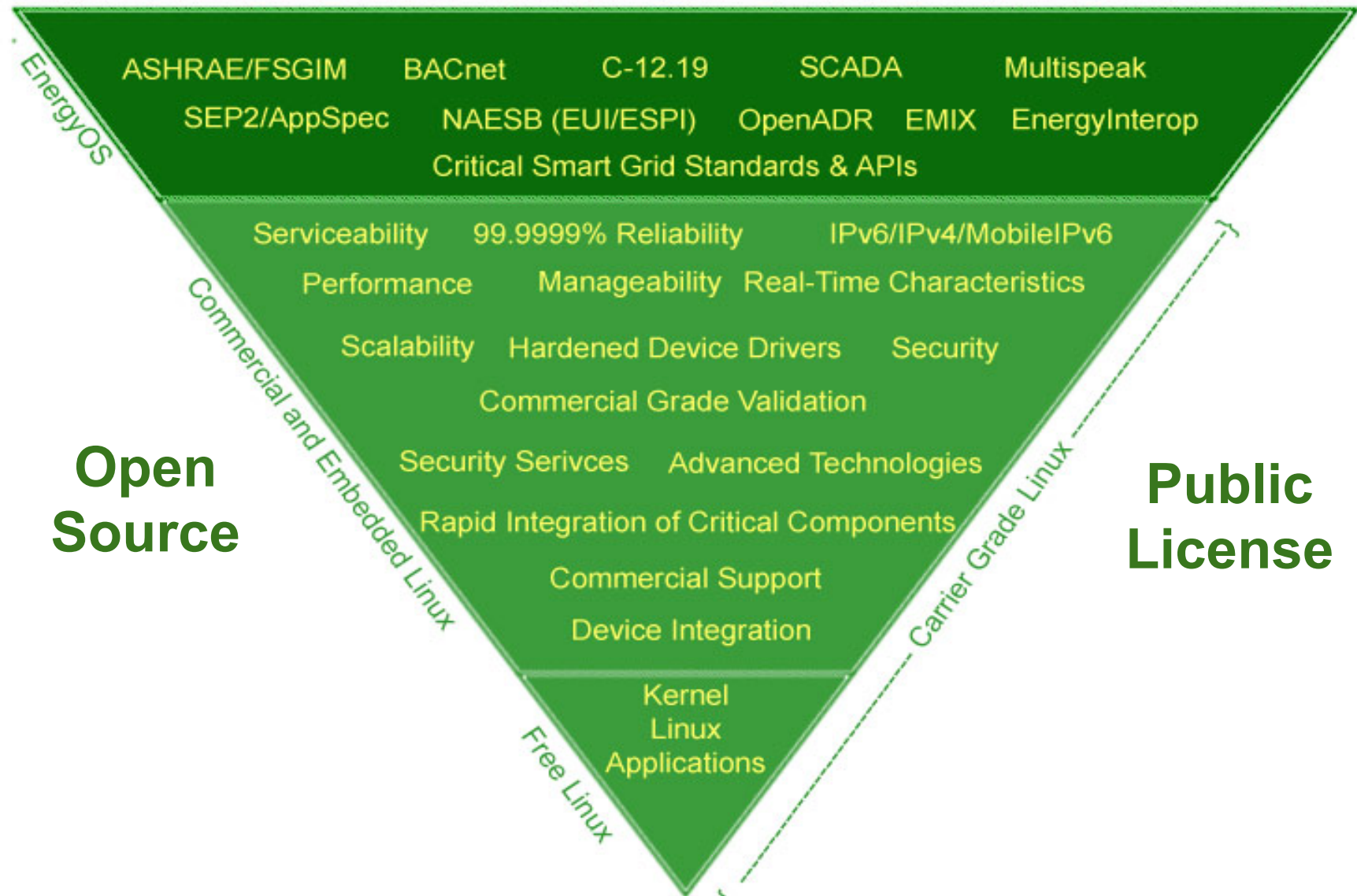
- Not Breaking New Ground
- Successful Models in IT/Health/Finance
- Collaborations with Existing Projects
- Open Standards
- Open Development Collaborations

Global Innovation

and Success!

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EnergyOS - "Utility Grade" Smart Grid



More Information: john.teeter@energyos.org